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CASE 1-32526A



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE PCT NATIONAL STAGE APPLICATION OF

JOHN SMITH

INTERNATIONAL APPLICATION NO: PCT/EP03/06193

FILED: 12 JUNE 2003

U.S. APPLICATION NO: 10/517,904

35 USC §371 DATE: Not Yet Known

FOR: PURIFIED PKB SER 473 KINASE AND USES THEREOF

**Mail Stop: Amendment**

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Applicant believes this paper is being filed before the mailing date of a first Office Action on the merits, and so under 37 C.F.R. §1.97(b)(3) no fees are required. If a fee is deemed to be required, the Commissioner is hereby authorized to charge such fee to Deposit Account No. 19-0134.

In accordance with 37 C.F.R. §1.56, applicant wishes to call the Examiner's attention to the references cited on the attached form(s) PTO-1449.

The asterisked references were cited in the International Search Report. Since copies of said references were forwarded by the International Bureau, only copies of the non-asterisked references are enclosed.

Some of the asterisked references were cited in a search report in a corresponding British application. A copy of that search report is also enclosed herewith.

The Examiner is requested to consider the foregoing information in relation to this application and indicate that each reference was considered by returning a copy of the initialed PTO 1449 form(s).

Respectfully submitted,

  
John T. Prince  
Attorney for Applicant  
Reg. No. 43,019

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Corporate Intellectual Property  
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Date: May 17, 2005

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ATTY. DOCKET NO.  
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**U.S. PATENT DOCUMENTS**

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**FOREIGN PATENT DOCUMENTS**

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent pages, Etc.)

AR	Alessi, et al., "Characterization of a 3-phosphoinositide-dependent Protein Kinase Which Phosphorylates and Activates Protein Kinase Ba", Current Biol., Vol. 7, pp. 261-9 (1997)
AS	Alessi, et al., "Mechanism of Activation of Protein Kinase B by Insulin and IGF-1", The Embo J., Vol. 15, pp. 6541-51 (1996)
AT	Andjelkovic, et al., "Role of Translocation in the Activation and Function of Protein Kinase B", J. of Biol. Chem., Vol. 272, pp. 31515-24 (1997)

**EXAMINER****DATE CONSIDERED**

\*EXAMINER: Initial of reference considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.

## INFORMATION DISCLOSURE CITATION

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EXAMINER INITIAL

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

	DA	Andjelkovic, et al., "Activation and Phosphorylation of a Pleckstrin Homology Domain Containing Protein Kinase (RAC-PK/PKB) Promoted by Serum and Protein Phosphatase Inhibitors", Proc. Natl. Acad. Sci., Vol. 93, pp. 5699-5704 (1996)
	DB	Andjelkovic, et al., "Domain Swapping Used to Investigate the Mechanism of Protein Kinase B Regulation by 3-Phosphoinositide-dependent Protein Kinase 1 and Ser473 Kinase", Mol. and Cell Biol., Vol. 19, pp. 5061-72 (1999) *
	DC	Balandran, et al., "PDK1 Acquires PDK2 Activity in the Presence of a Synthetic Peptide Derived from the Carboxyl Terminus of PRK2", Curr. Biol., Vol. 9, pp. 393-404 (1999)
	DD	Bickel, et al., "Flotillin and Epidermal Surface Antigen Define a New Family of Caveolae-associated Integral Membrane Proteins", J. Biol. Chem., Vol. 272, pp. 13793-13802 (1997)
	DE	Brazil, et al., "Ten Years of Protein Kinase B Signalling: A Hard Akt to Follow", Trends in Bio. Sci., Vol. 26, pp. 657-664 (2001)
	DF	Cantley, et al., "New Insights into Tumor Suppression: PTEN Suppresses Tumor Formation by Restraining the Phosphoinositide 3-Kinase/Akt Pathway", Proc. Natl. Acad. Sci., Vol. 96, pp. 4240-45 (1999)
	DG	Coffer, et al., "Protein Kinase B (c-Akt): A Multifunctional Mediator of Phosphatidylinositol 3-Kinase Activation", Biochem. J., Vol. 335, pp. 1-13 (1998)
	DH	Cote, et al., "Generation of Human Monoclonal Antibodies Reactive with Cellular Antigens", Proc. Natl. Acad. Sci., Vol. 80, pp. 2026-30 (1983)
	DI	Delcommenne, et al., "Phosphoinositide-3-OH Kinase-dependent Regulation of Glycogen Synthase Kinase 3 and Protein Kinase B/AKT by the Integrin-linked Kinase", Proc. Natl. Acad. Sci., Vol. 95, pp. 11211-216 (1998)
	DJ	Downward, "Mechanisms and Consequences of Activation of Protein Kinase B/AKT", Cur. Opin. Cell Biol., Vol. 10, pp. 262-67 (1998)
	DK	Galbiati, et al., "Emerging Themes in Lipid Rafts and Caveolae", Cell, Vol. 106, pp. 403-11 (2001)
	DL	Graham, et al., "Characteristics of a Human Cell Line Transformed by DNA from Human Adenovirus Type 5", J. Gen. Virol., Vol. 36, pp. 59-74 (1977)
	DM	Hannigan, et al., "Regulation of Cell Adhesion and Anchorage-dependent Growth by a New B1-Integrin-Linked Protein Kinase", Nature, Vol. 379, pp. 91-6 (1996)
	DN	Hanahan, et al., "The Hallmarks of Cancer", Cell, Vol. 100, pp. 57-70 (2000)

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AR	Hill, et al., "Analysis of Protein Kinase B/Akt", Methods in Enzym., Vol. 345, pp. 449-63 (2002)
AS	Hill, et al., "Insulin-stimulated Protein Kinase B Phosphorylation on Ser-473 Is Independent of Its Activity and Occurs through a Staurosporine-insensitive Kinase", J. of Bio. Chem., Vol. 276, pp. 25643-46 (2001) *
AT	Huse, et al., "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science, Vol. 246, pp. 1275-81 (1989)

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	DA	Jones, et al., "Molecular Cloning and Identification of a Serine/Threonine Protein Kinase of the Second-messenger Subfamily", Proc. Natl. Acad. Sci., Vol. 88, pp. 4171-75 (1991)
	DB	Kandel, et al., "The Regulation and Activities of the Multifunctional Serine/Threonine Kinase Akt/PKB", Exp. Cell Res., Vol. 253, pp. 210-29 (1999)
	DC	Kohler, "Continuous Cultures of Fused Cells Secreting Antibody of Predefined Specificity", Nature, Vol. 256, pp. 495-98 (1975)
	DD	Kozbor, et al., "The Production of Monoclonal Antibodies from Human Lymphocytes", Imm. Today, Vol. 4, pp. 72-9 (1983)
	DE	Lynch, et al., "Integrin-Linked Kinase Regulates Phosphorylation of Serine 473 of Protein Kinase B by an Indirect Mechanism", Oncogene, Vol. 18, pp. 8024-32 (1999)
	DF	Orlandi, et al., "Cloning Immunoglobulin Variable Domains for Expression by the Polymerase Chain Reaction", PNAS, Vol. 86, pp. 3833-37 (1989)
	DG	Park, et al., "Identification of Tyrosine Phosphorylation Sites on 3-Phosphoinositide-dependent Protein Kinase-1 and Their Role in Regulating Kinase Activity", J. Bio. Chem., Vol. 276, pp. 37459-71 (2001)
	DH	Simons, et al., "Lipid Rafts and Signal Transduction", Nature Rev., Vol. 1, pp. 31-40 (2000)
	DI	Stephens, et al., "Protein Kinase B Kinases that Mediate Phosphatidylinositol 3, 4, 5-trisphosphate-dependent Activation of Protein Kinase B", Science, Vol. 279, pp. 710-14 (1998)
	DJ	Stillman, et al., "Replication and Supercoiling of Simian Virus 40 DNA in Cell Extracts from Human Cells", Mol. and Cell. Biol., Vol. 5, pp. 2051-60 (1985)
	DK	Stokoe, et al., "Dual Role of Phosphatidylinositol-3, 4, 5-trisphosphate in the Activation of Protein Kinase B", Science, Vol. 277, pp. 567-70 (1997)
	DL	Toker, et al., "Akt/Protein Kinase B Is Regulated by Autophosphorylation at the Hypothetical PDK-2 Site", J. of Biol. Chem., Vol. 275, pp. 8271-74 (2000)
	DM	VanHaesbroeck, et al., "The PI3K-PDK1 Connection: More than Just a Road to PKB", Biochem., J., Vol. 346, pp. 561-76 (2000)
	DN	Vazquez, et al., "The PTEN Tumor Suppressor Protein: An Antagonist of Phosphoinositide 3-Kinase Signaling", Biochimica et Biophysica Acta, Vol. 1470, pp. M24-M35 (2000)

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AM	WO 0036135 *	6/22/00	PCT			<input type="checkbox"/>	<input type="checkbox"/>
AN	WO 97 22360	6/26/97	PCT			<input type="checkbox"/>	<input type="checkbox"/>
AO	WO 0056864	9/28/00	PCT			<input type="checkbox"/>	<input type="checkbox"/>
AP						<input type="checkbox"/>	<input type="checkbox"/>
AQ						<input type="checkbox"/>	<input type="checkbox"/>

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent pages, Etc.)

AR	Williams, et al., "The Role of 3-Phosphoinositide-dependent Protein Kinase 1 in Activating AGC Kinases Defined in Embryonic Stem Cells", Curr. Biol., Vol. 10, pp. 439-48 (2000)
AS	Winter, et al., "Man-made Antibodies", Nature, Vol. 349, pp. 293-99 (1991)
AT	Yang, et al., "Molecular Mechanism for the Regulation of Protein Kinase B/Akt by Hydrophobic Motif Phosphorylation", Mol. Cell, Vol. 9, pp. 1227-40 (2002)

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Sheet: 686

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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)**

	DA	Zervas, et al., "Drosophila Integrin-linked Kinase Is Required at Sites of Integrin Adhesion to Link the Cytoskeleton to the Plasma Membrane", J. of Cell Biol., Vol. 152, pp. 1007-18 (2001)
	DB	Kroner, et al., "Dual Regulation of ...", J. Biol. Chem., Vol. 275, pp. 27790-27798 (2000) *
	DC	Peterson, et al., "Kinase Phosphorylation....", Curr. Biol., Vol. 9, pp. R521-24 (1999) *
	DD	Hill, et al, "Identification of a Plasma Membrane Raft-associated PKB Ser473 Kinase Activity that Is Distinct from ILK and PDK1", Curr. Biol., Vol. 12, pp. 1251-55 (2002) *
	DE	Rane, et al., "P38 Kinase-dependent Mapkapk-2 Activation Functions as 3-phosphoinositide-dependent Kinase-2 for Akt in Human Neutrophils", J. of Biol. Chem., Vol. 276, pp. 3517-23 (2001)*
	DF	Balandran, et al, "PKD1 Acquires PDK2 Activity in the Presence of a Synthetic Peptide Derived from the Carboxyl Terminus of PRK2", Curr. Biol., Vol. 9, pp. 393-404 (1999) *
	DG	Persad, et al., "Regulation of Protein Kinase B/Akt-serine 473 Phosphorylation by Integrin-linked Kinase: Critical Roles for Kinase Activity and Amino Acids Arginine 211 and Serine 343", J. of Biol. Chem., Vol. 276, pp. 27462-69 (2001)*
	DH	Brazil, et al., "Ten Years of Protein Kinase B Signalling: A Hard Akt to Follow", TIBS Trends in Bio. Sci., Vol. 26, pp. 657-64 (2001) *
	DI	Troussard, et al., "Conditional Knock-out of Integrin-linked Kinase Demonstrates an Essential Role in Protein Kinase B/Akt Activation", J. of Biol. Chem., Vol. 278, pp. 22374-78 (2003) *
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